

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
PCS Partners, L.P.) WT Docket No. 16-149
)
Petition for Waiver of 47 C.F.R. § 90.353(b) and)
Request for Extension of Time and for Expedited)
Treatment)

ORDER

Adopted: November 20, 2017

Released: November 20, 2017

By the Chief, Mobility Division, Wireless Telecommunications Bureau:

1. In this Order, we address the request filed by PCS Partners, L.P. (PCSP)¹ for waiver of Section 90.353(b) of the Commission's M-LMS rules, which requires that all transmissions by M-LMS licensees be related to location and monitoring services,² and further extension of time to meet the interim and final construction deadlines for its 32 M-LMS 900 MHz Economic Area (EA) licenses.³ For the reasons discussed below, we deny PCSP's request.

I. BACKGROUND

2. *M-LMS Band.* In 1995, the Commission established the Location and Monitoring Service (LMS) as a new service in the 902-928 MHz band to be licensed on a geographic area basis,⁴ where licensees would use the band in accordance with a hierarchy of spectrum usage rights.⁵ The Commission

¹ PCSP holds 32 Multilateration Location and Monitoring Service (M-LMS) licenses, call signs WPYE267-298, scattered across the continental United States. All of PCSP's licenses are A Block Licenses, with the exception of Call Sign WPYE291, which is a C Block License.

² 47 CFR § 90.353(b) (requires all transmissions to be related to location or monitoring functions of the system).

³ See Petition for Waiver of 47 CFR § 90.353(b), and Request for Extension of Time and for Expedited Treatment, WT Docket No. 16-149 (filed Apr. 15, 2016) (PCSP Request); Amendment to Petition for Waiver of 47 CFR § 90.353(b), and Request for Extension of Time and for Expedited Treatment, WT Docket No. 16-149 (filed Aug. 19, 2016) (PCSP Amended Request). For a complete listing of PCSP's filings in the Commission's Universal Licensing System (ULS) that are associated with its request in WT Docket No. 16-149, see Appendices A and B.

⁴ *Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, Report and Order, 10 FCC Rcd 4695 (1995) (LMS Report and Order)* (adopting rules encompassing the Automatic Vehicle Monitoring service for which the Commission had adopted "interim" rules in 1974). M-LMS licensees are regulated under Part 90 of the Commission's rules, which generally governs radio communications systems licensed and used in the Public Safety, Industrial/Business Radio Pool, and Radiolocation Radio Services. See 47 CFR § 90.1, *et seq.*

⁵ The band is allocated on a primary basis to both Federal radiolocation systems and Industrial, Scientific, and Medical (ISM) equipment. 47 CFR §§ 2.106, 18.301, 18.11(c). Federal fixed and mobile services are allocated on a secondary basis to Federal radiolocation systems and ISM equipment. LMS licenses are allocated on a secondary basis to Federal users and to ISM devices and may not cause interference to and must tolerate interference from these users and devices. 47 CFR § 90.353(a). Amateur radio operations are allocated on a secondary basis to LMS. 47 CFR § 97.301. Finally, unlicensed devices are authorized under Part 15 to use the 902-928 MHz band, but such devices are not afforded interference protection rights and may not cause harmful interference to LMS licensees,

(continued....)

placed certain limitations on M-LMS operations to facilitate sharing of the 902-928 MHz band by multiple licensed services as well as unlicensed devices.⁶ Specifically, M-LMS systems are required to use non-voice radio techniques to determine the location and status of mobile radio units in providing location-based services. In addition, M-LMS licensees are required to use multiple transmission paths to utilize non-voice radio techniques to track and locate objects over a wide geographic area by measuring the difference in time of arrival or phase of signals transmitted from a unit to a number of fixed points, or from a number of fixed points to the unit that is to be located.⁷

3. The Commission also adopted construction requirements for the service. Pursuant to the Commission's rules, M-LMS licenses must either construct and operate a sufficient number of base stations to serve one-third and two-thirds of an EA's population within five and ten years of the initial license grant, respectively, or alternatively, an M-LMS licensee may make a showing of substantial service for its license at the five- and ten-year benchmarks.⁸ The Commission auctioned M-LMS licenses in 1999 and 2001 (Auctions 21 and 39).⁹ At the time when PCSP first filed the instant request, six licensees—PCSP, Progeny, and four others—held a total of 614 M-LMS licenses as a result of the two auctions and various secondary market transactions.¹⁰ PCSP first acquired its licenses in Auction 39, which closed in 2001.¹¹ As described below, PCSP along with other licensees has received multiple construction extensions beginning in 2008,¹² and its M-LMS licenses currently have an interim construction deadline of September 4, 2016, and a final deadline of September 4, 2018.

4. *Band-Wide Commission Action.* On March 1, 2006, the Commission released a *Notice of Proposed Rulemaking*, initiating a re-examination of the rules governing the M-LMS band.¹³ The Commission, noting the “very limited development of M-LMS service under the existing rules,” sought to examine various new approaches that potentially could make for more effective use of the M-LMS spectrum in the 904-909.75 and 919.75-928 MHz portions of the 902-928 MHz band by providing licensees greater flexibility to respond to market conditions while continuing to protect federal and other

(Continued from previous page) _____ amateur operations, or other licensed systems. *See* 47 CFR § 90.361. However, users of Part 15 devices conforming to specified technical conditions are insulated from claims that such devices cause harmful interference to M-LMS systems in the 902-928 MHz band. *Id.*

⁶ *See also LMS Report and Order*, 10 FCC Rcd at 4708, para. 23.

⁷ *See* 47 CFR §§ 90.7, 90.353(d); *LMS Report and Order*, 10 FCC Rcd at 4703, para. 14.

⁸ 47 CFR § 90.155(d). An M-LMS license will automatically terminate as of the construction deadline if the licensee fails to meet the construction requirement. *See* 47 CFR §§ 1.946(c), 1.955(a)(2).

⁹ *Location and Monitoring Service Auction Closes, Winning Bidders in the Auction of 528 Multilateration Licenses in the Location and Monitoring Service*, Public Notice, 14 FCC Rcd 3754 (1999); *Public Coast and Location and Monitoring Service Spectrum Auction Closes, Winning Bidders Announced*, Public Notice, 16 FCC Rcd 12509 (2001).

¹⁰ In addition to the 32 A and C Block licenses held by PCSP, the ULS records then indicated that Progeny LMS, LLC (Progeny) held 228 licenses (B and C Block); Helen Wong-Armijo (Wong-Armijo) held 84 licenses (B and C Block), FCR, Inc. (FCR) held 13 licenses (A Block); Skybridge Spectrum Foundation held 128 licenses (A Block); and Telesaurus Holdings GB, LLC held 129 licenses (A and C Block). Where applicable, we jointly refer to Skybridge Spectrum Foundation and Telesaurus Holdings GB, LLC, as “SSF/THL.”

¹¹ *See VHF Public Coast and Location and Monitoring Service Spectrum Auction Closes, Winning Bidders Announced*, Public Notice, DA 01-1443 (WTB June 15, 2001).

¹² *See infra* notes 23 and 24.

¹³ *Amendment of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands, Notice of Proposed Rulemaking*, 21 FCC Rcd 2809 (2006) (*M-LMS NPRM*).

licensed users and also avoiding any significant increased interference to unlicensed users in the band.¹⁴ Both licensed and unlicensed users in the 902-928 MHz band contributed to the robust record. Although several licensed users—PCSP among them—supported proposals to replace the service use restrictions with more flexible rules,¹⁵ many commenters opposed expanding the permissible scope of M-LMS operations to include “communications unrelated to location-based services” and permitting M-LMS licensees to interconnect in real time with the public switched telephone network.¹⁶ In the *M-LMS Termination Order*,¹⁷ adopted on June 10, 2014, the Commission decided not to revise the M-LMS rules and instead terminated the proceeding without further action. It concluded that the various proposals made in 2006 for broad revisions to the applicable rules did not merit further consideration at that time.¹⁸ The Commission found that wholesale changes to the existing M-LMS framework, such as whether to relax the limitations on M-LMS interconnection with the public switched telephone network,¹⁹ are not warranted, and are unnecessary to provide sufficient flexibility to M-LMS licensees to provide their location services.²⁰ The Commission concluded that the existing framework could provide M-LMS licensees with sufficient opportunities to provide location-based service offerings, based on recent developments in the M-LMS band.²¹ These developments included the ability of Progeny to develop and commence commercial operations of its multilateration location service network in co-existence with unlicensed operations in the band under the initial framework established by the Commission.²²

5. *The Bureau’s Actions.* From 2004-2007, the Mobility Division (Division) of the Wireless Telecommunications Bureau (Bureau) granted multiple construction extensions for all licensees in the band.²³ Following the Commission’s adoption of the *M-LMS Termination Order* in 2014, the Division granted additional band-wide extensions for interim and final construction deadlines in 2014 (with the exception of Progeny, which the Division addressed through a separate order that is discussed below).²⁴ The Division’s primary rationale for granting the 2014 extension to all M-LMS licensees (other than Progeny) rested on the Commission’s termination of the M-LMS rulemaking proceeding, which removed the regulatory uncertainty and established that further M-LMS rule changes were not forthcoming.²⁵ In limiting relief to a two-year period, the Division noted Progeny’s recent success with developing M-LMS equipment and the lengthy period during which all the M-LMS licensees had already held their licenses.²⁶ The Division also cited Progeny’s M-LMS equipment development in rejecting arguments from some commenters that any additional extension should not be granted because M-LMS is an obsolete technology.²⁷ M-LMS licensees received a two-year extension of time to finalize their business plans,

¹⁴ *Id.* at 2810, para. 1. The Commission noted that none of the six M-LMS license holders of the auctioned licenses were providing M-LMS services using their spectrum. *Id.* at 2814, para. 11.

¹⁵ See, e.g., PCSP Reply, WT Docket No. 06-49, at 9 (PCSP Rulemaking Reply) (encouraging the Commission to support flexibility and innovation by removing “out-of-date” and “service-limiting spectrum use restrictions”).

¹⁶ See, e.g., Consumer Electronics Association Comments, WT Docket No. at 2; Motorola, Inc. Comments, WT Docket No. 06-49, at 6; Telecommunications Industry Association Comments, WT Docket No. 06-49, at 8-9; New America Foundation et al. Comments, WT Docket No. 06-49, at 17 (raising the concern that interconnection and messaging in the 902-928 MHz band not only raises the potential for harmful interference to Part 15 users, but also would result in use that would be subject to interference from the primary users in the band).

¹⁷ *Amendment of the Commission’s Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands, Order*, 29 FCC Rcd 6361 (2014) (*M-LMS Termination Order*).

¹⁸ *Id.* at 6364, para. 8 (citing *M-LMS NPRM*, 21 FCC Rcd at 2811, para. 4).

¹⁹ See *M-LMS NPRM*, 21 FCC Rcd at 2828, para. 23 (inviting comment specifically on “the degree to which we could or should relax the restrictions on permissible communications and type of interconnection”).

²⁰ *M-LMS Termination Order*, 29 FCC Rcd at 6364, para. 8.

²¹ *Id.*

²² *Id.*

including development of equipment and deployment of services or, if necessary, engaging in secondary market transactions.²⁸ In 2016, FCR, Wong-Armijo, and SSF/THL, all having failed to timely construct or consummate a transaction resulting in another licensee's timely construction by the extended September 2014 deadline, separately sought additional time to meet their construction deadlines, which the Division denied in November 2017.²⁹

6. *Progeny's Waiver Requests.* In March 2011, Progeny requested a waiver of two M-LMS technical rules, which the Bureau and the Commission's Office of Engineering and Technology (OET) jointly granted in December 2011 to enable Progeny to utilize a more advanced and efficient version of multilateration location service than had been contemplated when the M-LMS rules were initially adopted.³⁰ In the *Progeny Limited Waiver Order*, the Bureau and OET waived the prescriptive technical requirements specified as part of the construction requirements set forth in Section 90.155(e)³¹ to allow

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²³ See, e.g., *Request of Warren C. Havens for Waiver of the Five-Year Construction Requirement for His Multilateration Location and Monitoring Service Economic Area Licenses*, Memorandum Opinion and Order, 19 FCC Rcd 23742 (WTB MD 2004) (granting an additional three years to THL's predecessor in interest), *recon. denied Multilateration Location and Monitoring Service Construction Requirements*, Order on Reconsideration and Memorandum Opinion and Order, 22 FCC Rcd 1925 (WTB MD 2007) (*2007 Extension Order on Recon*), *recon. and app. for review pending*; *Request for Extension of Five-Year Construction Requirement*, Letter, 20 FCC Rcd 4293 (WTB MD 2005) (granting an additional three years to FCR), *recon. denied 2007 Extension Order on Recon*, *recon. and app. for review pending*; *Request of Progeny LMS, LLC for a Three-Year Extension of the Five-Year Construction Requirement for its Multilateration Location and Monitoring Services Economic Area Licenses*, Memorandum Opinion and Order, 21 FCC Rcd 5928 (WTB MD 2006) (granting an additional three years to Progeny), *recon. denied 2007 Extension Order on Recon*, *recon. and app. for review pending*; *Requests of Progeny LMS, LLC and PCS Partners, L.P. for Waiver of Multilateration Location and Monitoring Service Construction Rules*, Order, 23 FCC Rcd 17250 (WTB 2008) (granting another extension to all M-LMS licensees to July 19, 2012, and July 19, 2014), *recon. pending*.

²⁴ See *Requests by FCR, Inc., Progeny LMS, LLC, PCS Partners, L.P. and Helen Wong-Armijo for Waiver and Limited Extension of Time; Requests by Skybridge Spectrum Foundation and Telesaurus Holdings GB, LLC for Waiver and Limited Extension of Time*, Order, 29 FCC Rcd 10361 (WTB MD 2014) (*2014 Extension Order*). In 2017, the Division denied PCSP and Havens's request for reconsideration of the *2014 Extension Order*. See *PCS Partners, L.P., Applications for Waiver and Limited Extension of Time*, Order on Reconsideration, 32 FCC Rcd 556 (WTB MD 2017) (*2017 M-LMS Order on Recon*), *apps. for review pending*.

²⁵ *2014 Extension Order*, 29 FCC Rcd at 10367, para. 17.

²⁶ *Id.* at 10367-68, para. 17.

²⁷ *Id.* at 10367, para. 17 and 10368, para. 19 (rejecting IEEE 802's assertion that "M-LMS is an obsolete technology" that is no longer viable as a competitive geolocation technology given Progeny's development and subsequent demonstration of its technology that provides improved indoor location capabilities and the subsequent authorization to launch a commercial M-LMS network); see also *Request of Progeny LMS, LLC for Waiver and Limited Extension of Time*, Order, 32 FCC Rcd 122, 136, para. 28 (WTB MD 2017) (*2017 Progeny Extension Order*), *recon. and app. for review pending*.

²⁸ *M-LMS Extension Order*, 29 FCC Rcd at 10368, para. 18. M-LMS licensees were also cautioned that the "Bureau will not consider future requests for waiver or extension of either the interim or final construction deadline based on claims related to lack of equipment." *Id.*

²⁹ *Helen Wong-Armijo, Applications for Waiver and Extension of Time*, WT Docket No. 16-385, Order, DA 17-1124 (WTB MD Nov. 20, 2017) (resulting in automatic cancellation of all licenses held by these licensees). The other licensees, including PCSP, did not construct prior to their interim construction deadlines, but instead sought additional relief. See, e.g., *id.*; PCSP Request.

³⁰ See *Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules*, Order, 26 FCC Rcd 16878 (WTB/OET 2011) (*Progeny Limited Waiver Order*), *recons. pending*.

³¹ 47 CFR § 90.155(e).

Progeny to take advantage of technical advances in multilateration technologies in deploying its network to provide location-based services.³² The order also granted a waiver of Section 90.353(g), which provides that M-LMS systems’ “primary” operations involve the provision of vehicle location services, to enable Progeny to make its service equally available to other mobile devices, so long as it provides its location service to both vehicular and non-vehicular location services.³³ This grant was further conditioned on Progeny filing a field testing report prior to commencing commercial operations demonstrating that its M-LMS system would not cause unacceptable levels of interference to Part 15 users that operate in the 902-928 MHz band.³⁴ Following grant of this request, Progeny submitted the requisite field tests, and the Commission concluded in June 2013 that Progeny could commence commercial operations of its position location service system.³⁵

7. On January 17, 2017, the Division conditionally granted Progeny’s request for waiver to extend applicable construction deadlines for its B and C Block licenses.³⁶ The Division found that “a number of factors, taken collectively, justify relief in the public interest, provided that the conditions [that the Division] specified are adhered to.”³⁷ First, such relief would facilitate Progeny’s provision of service to wireless carriers to enable them to meet the enhanced 911 location accuracy deadlines the Commission adopted in the Commission’s 2015 *Indoor Location Accuracy Order*³⁸ to address a critical public safety need for improving indoor location accuracy.³⁹ Second, rather than seek further relief based on speculative business plans, Progeny had constructed its initial position location network after designing and contracting for custom manufactured M-LMS transmitters in a spectrum band where equipment had not earlier been available.⁴⁰ Third, in 2011, Progeny began test operations for a network initially comprised of hundreds of beacons in 39 of its 40 largest EAs.⁴¹ Finally, after successful testing, Progeny commenced actual operations in those top 40 EAs in 2013.⁴²

8. *PCSP’s Request.* On April 15, 2016, PCSP filed its request for waiver of the rule restricting M-LMS service to location monitoring to permit it to transmit machine-type-communications (MTC), enabling its user devices to transmit data for Internet of Things (IoT) applications.⁴³ Specifically, PCSP seeks a waiver of Section 90.353(b) of the Commission’s rules,⁴⁴ which requires all transmissions to be related to location or monitoring functions, so that it could use the spectrum to deploy a system that utilizes a recently released Long Term Evolution (LTE) standard to transmit MTC to provide narrowband

³² *Progeny Limited Waiver Order*, 26 FCC Rcd at 16884, para. 14.

³³ *Id.* at 16886, para. 22; *see id.* 47 CFR § 90.353(g).

³⁴ *Progeny Limited Waiver Order*, 26 FCC Rcd at 16889, para. 29 and 16890, para. 35.

³⁵ *Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules; Progeny LMS, LLC Demonstration of Compliance with Section 90.355(d) of the Commission’s Rules*, Order, 28 FCC Rcd 8555 (2013).

³⁶ *2017 Progeny Extension Order*, 32 FCC Rcd 122. The Bureau denied Progeny’s request for relief with respect to its A Block licenses, which automatically terminated as of July 19, 2012. *Id.* at 139-40, para. 36.

³⁷ *Id.*

³⁸ *See Wireless E911 Location Accuracy Requirements*, Fourth Report and Order, 30 FCC Rcd 1259 (2015) (*Indoor Location Accuracy Order*).

³⁹ *See 2017 Progeny Extension Order*, 32 FCC Rcd at 136, para. 28.

⁴⁰ *See id.*

⁴¹ *See id.*

⁴² *See id.*

⁴³ PCSP Request at 2-3. PCSP amended its request on August 19, 2016.

⁴⁴ 47 CFR § 90.353(b).

IoT applications and services in addition to trilateration-based M-LMS.⁴⁵ PCSP also asks for an extension pursuant to Section 90.155(g)⁴⁶ or waiver of its construction deadline to have an additional four years beyond its respective interim and final construction deadlines to implement this service.⁴⁷

9. The Bureau placed PCSP's request on public notice on May 4, 2016.⁴⁸ Unlicensed stakeholders and other advocates opposed PCSP's request,⁴⁹ stating that this band is already being efficiently used for IoT applications by unlicensed users,⁵⁰ and asserting that PCSP fails to demonstrate its proposed IoT and M-LMS service would not cause unacceptable levels of interference to Part 15 users of the 902-928 MHz band.⁵¹ One M-LMS licensee supports an extension or waiver of PCSP's construction deadlines on public interest grounds, e.g., would enable the deployment of helpful new technologies.⁵² PCSP filed reply comments asserting that the above interference concerns are largely theoretical,⁵³ and also filed an amendment adding its sole C Block license, call sign WPYE291, to the PCSP Request.⁵⁴

⁴⁵ PCSP Request at 2-3.

⁴⁶ 47 CFR § 90.155(g).

⁴⁷ PCSP Request at 13-14. PCSP also seeks expedited treatment of its request for waiver and extension of time. *Id.* at 12 n.35.

⁴⁸ *Wireless Telecommunications Bureau Seeks Comment on PCS Partners Requests for Multilateration Location and Monitoring Service Waiver and Construction Extension*, Public Notice, 31 FCC Rcd 4408 (WTB 2016).

⁴⁹ See, e.g., Landis+Gyr Technology, Inc. (Landis+Gyr) Comments (telemetry service provider that uses the 902-928 band for unlicensed device operation); Inovonics Wireless Corporation (Inovonics) Comments (manufacturer of unlicensed devices that use this band); Itron, Inc. Comments (manufacturer of unlicensed devices that use this band); Starkey Hearing Technologies Comments (manufacturer of unlicensed hearing aids that use this band); Wireless Internet Service Providers Association (WISPA) Comments (trade association representing wireless Internet service providers that provide service using unlicensed frequencies); Public Knowledge et al. Comments (public interest advocates).

⁵⁰ Landis+Gyr Comments at 4; Inovonics Comments at 4.

⁵¹ See, e.g., Landis+Gyr Comments at 3-4; Inovonics Comments at 4. One commenter points out that PCSP presents no evidence that it has taken any concrete steps such as the active development or testing of equipment. Public Knowledge et al. Comments at 5.

⁵² SSF/THL Comments at 3. In filing these comments, SSF/THL acted through a court-appointed receiver. See *Arnold Leong v. Warren Havens et al.*, Case No. 2002-070640, Order Appointing Receiver After Hearing and Preliminary Injunction (Nov. 16, 2015). The court appointed Susan L. Uecker as receiver (Receiver) to take control and possession of several entities, including SSF/THL, and the licenses held by those entities. *Id.* at Attachment 1. On December 17, 2015, the Receiver filed involuntary transfer of control applications on behalf of these entities, notifying the Commission of the involuntary transfer of the licenses to the Receiver; these applications were accepted in February 2016. See ULS File Nos. 0007061847 and 0007060898 (filed Dec. 17, 2015). A petition for reconsideration of the transfer of control to the Receiver was filed by Mr. Havens and remains pending. See Petition for Reconsideration, to Deny, and for Other Relief, ULS File No. 0007061847 (filed Mar. 11, 2016). We note SSF/THL's comment was silent with respect to support of PCSP's request for waiver of the location service requirement.

⁵³ PCSP Reply at 3. Additionally, PCSP opposes the imposition of conditions that Landis+Gyr and WISPA raised as alternatives to denial in their comments. PCSP Reply at 8-10.

⁵⁴ PCSP Amended Request. PCSP also filed three *ex parte* notices in the docket, one of which responded to an *ex parte* filed by Public Knowledge. See Letter from E. Ashton Johnston, Telecommunications Law Professionals PLLC, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 16-149 (filed June 22, 2016) (following a meeting with the Bureau); Letter from Harold Feld, Senior Vice President, Public Knowledge, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 16-149 et al. (filed Sept. 15, 2016); Letter from E. Ashton Johnston, Telecommunications Law Professionals PLLC, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 16-149 (filed Oct. 21, 2016) (in response to Public Knowledge's *ex parte* filing in this docket); Letter from E. Ashton Johnston,

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II. DISCUSSION

10. *Standard of Review.* Under Section 1.925(b)(3) of the Commission's rules, a waiver may be granted if it is shown that: (i) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (ii) in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.⁵⁵ As with other Commission rules, requests to waive a construction requirement must "meet a high hurdle at the starting gate."⁵⁶ Moreover, construction requirements serve an important purpose to promote development and efficient use of spectrum in keeping with the Commission's statutory obligations.⁵⁷ Waiver of construction requirements is infrequent, and only appropriate when consistent with the statute and the public interest.⁵⁸ In evaluating its alternate request to grant an extension of time pursuant to Section 90.155(g), the Commission grants such requests "only if the failure to commence service is due to causes beyond [the licensee's] control."⁵⁹

11. *PCSP Request for Waiver.* PCSP argues that grant of a waiver of the service rule restrictions to enable it to use its spectrum for IoT purposes will serve the public interest by fostering an innovative, efficient use of the band without causing more interference than permitted by the Commission's rules, and would create competition in the band between itself and Progeny and resulting in benefit for consumers.⁶⁰ PCSP asserts that grant of a waiver would further the underlying intent of the applicable rule and serve the public interest.⁶¹ PCSP also contends it has no reasonable alternative should the Commission apply the location-based limitation as required by this rule to its proposed system's transmissions, and that such application is inequitable, unduly burdensome, and contrary to the public interest.⁶² PCSP makes the related assertion that a further extension of its current construction requirements imposed by Section 90.155(d) is justified under Section 90.155(g)⁶³ and the Commission's waiver standards to enable its proposal to use LTE to transmit MTC transmissions for IoT applications in addition to M-LMS transmissions.⁶⁴

12. PCSP seeks relief from both the service limitation and the construction requirements in order to offer a service that will operate on the entirety of its A Block spectrum in 1.4 MHz segments to transmit both M-LMS and MTC at a duty cycle not exceeding 56 percent.⁶⁵ It asserts that the recent

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Telecommunications Law Professionals PLLC, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 16-149 (filed May 11, 2017) (following a meeting with the Bureau).

⁵⁵ 47 CFR § 1.925(b)(3). The Commission also may waive its rules for good cause shown. 47 CFR § 1.3.

⁵⁶ *WAIT Radio v. FCC*, 459 F.2d 1203, 1207 (D.C. Cir. 1972).

⁵⁷ 47 U.S.C. § 309(j) (imposing duty on Commission to include safeguards to ensure prompt delivery of service, to prevent stockpiling and warehousing of spectrum by licensees, and to protect the public interest in the use of the spectrum, particularly with respect to "efficient and intensive use of the electromagnetic spectrum").

⁵⁸ See *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969), *aff'd*, 459 F.2d 1203 (D.C. Cir. 1972), *cert. denied*, 93 S. Ct. 461 (1972).

⁵⁹ 47 CFR § 90.155(g).

⁶⁰ PCSP Request at 3-7.

⁶¹ *Id.* at 4-9 (seeking a waiver of Section 90.353(b), the location-based service restriction).

⁶² *Id.* at 3-4.

⁶³ 47 CFR § 90.155(g) (service-specific standard for extension providing "extensions will be granted only if the licensee shows that the failure to commence service is due to causes beyond its control").

⁶⁴ PCSP Request at 13-14; *see also* PCSP Amended Request at 2; PCSP Reply at 10.

⁶⁵ PCSP Request at 8 n.22; PCSP Reply at Declaration at 4, para. 7.

release of the 3GPP LTE standard will permit PCSP to utilize its licensed spectrum intermittently using a low duty cycle and low data rate to provide IoT services in addition to M-LMS.⁶⁶ PCSP claims this LTE standard will allow it to provide an innovative service while using significantly less bandwidth, enhancing competition and benefiting consumers.⁶⁷ Additionally, PCSP states that Progeny's co-existence testing with Part 15 vendors demonstrates that PCSP will not cause unacceptable interference to Part 15 users⁶⁸ and affirms that it will comply with the field testing requirement currently in the Commission's rules.⁶⁹ PCSP attacks the interference concerns raised by commenters by reiterating its arguments above and its general technical parameters,⁷⁰ adding that PCSP is willing to operate at a substantially lower duty cycle if the demand for traffic is sufficiently low or if there is a demonstration of unacceptable levels of interference to Part 15 users.⁷¹

13. After careful consideration of the record, we find that PCSP has not justified grant of a waiver of 90.353(b) to allow it to use its licenses for a purpose *beyond the provision of location-based services* (even in conjunction with providing a collateral location-based service). The Commission's rules expressly limit M-LMS licensees to provision of location-based services, which PCSP seeks to waive so it can support IoT applications by transmitting MTC in addition to providing an M-LMS service. Since the Commission's 1995 adoption of the M-LMS band plan,⁷² licensees have been restricted to providing location-based services with an unambiguous prohibition against providing services for general messaging purposes.⁷³ Although the Commission released the *M-LMS NPRM* in 2006, seeking comment on, *inter alia*, whether broader changes to the rules could permit additional, potentially more efficient uses of M-LMS spectrum,⁷⁴ it declined to revise the service restrictions. After considering the record provided by commenters, including PCSP's 2006 advocacy for "regulatory flexibility to develop and deploy new services,"⁷⁵ as well as recent developments by Progeny to develop and deploy an M-LMS system, the Commission found in its 2014 *M-LMS Termination Order* that wholesale changes to the existing M-LMS framework, which is based on coexistence of all users in the band, were not warranted, and were unnecessary to provide sufficient flexibility to M-LMS licensees to provide their location services.⁷⁶ The Commission's 2014 action also resolved any question of whether to permit non-location based services or unrestricted interconnection to the public switched telephone network.⁷⁷ Rather than

⁶⁶ PCSP Request at 4-5.

⁶⁷ *Id.* at 5-9. PCSP discusses using lower power levels based on Release 13's UE feature that permits advanced power saving and discontinuous operation modes with a focus on mainly small amounts such as 1 Kbytes of uplink traffic on a sporadic, non-persistent basis. PCSP Reply at Declaration at 6-7, para. 13.

⁶⁸ See PCSP Reply at 5.

⁶⁹ PCSP Request at 8; see also PCSP Reply at Declaration at 5-7, paras. 9-11, 13.

⁷⁰ PCSP Reply at 3; see also *id.* at 4 (reasserting that the duty cycle, considered in conjunction with the 1.4 MHz of bandwidth to be used per cell site, demonstrates that the potential for interference is much less than Progeny's approved system).

⁷¹ *Id.* at Declaration at 3, para. 6.

⁷² *LMS Report and Order*, 10 FCC Rcd at 4737, para. 81.

⁷³ *Id.* at 4709, paras. 25-26 (repeatedly asserting that the Commission does not intend M-LMS licenses to be used for messaging services, specifically mentioning both general as well as "fixed, point-to-multipoint, or point-to-point messaging services" as prohibited given the "adequate provision" elsewhere in the Commission's rules for messaging services and its intent to reserve the 902-928 MHz band for location services).

⁷⁴ *Id.* at 4708, para. 23.

⁷⁵ See PCSP Rulemaking Reply at 2.

⁷⁶ *M-LMS Termination Order*, 29 FCC Rcd at 6364, para. 8 (citing *M-LMS NPRM*, 21 FCC Rcd at 2811, para. 4).

⁷⁷ See *M-LMS Termination Order*, 29 FCC Rcd at 6363, para. 5 (referencing other 902-928 MHz band users' concerns); *supra* discussion at paragraph 4.

increase the potential for interference, the Commission preserved the existing licensee coexistence regime by retaining the location-based service limitation that “reflects the necessary balancing of the interests of LMS providers and other users of the 902-928 MHz band.”⁷⁸

14. Accordingly, consistent with the Commission’s 2014 decision not to expand the M-LMS service beyond location-based services, we decline to grant a waiver of the M-LMS service rule restrictions to permit PCSP a fundamental expansion of spectrum rights to provide non-location based services in the M-LMS band. The Commission decided not to adopt potentially similar rule changes after complete review of the record. PCSP’s arguments in support of its waiver request do not sufficiently address or justify this requested removal of the M-LMS service restriction to provide such spectrum rights expansion. As we have routinely reminded licensees prior to auction, it is a licensee’s responsibility to confirm that it can satisfy construction and service requirements in advance of acquiring spectrum.⁷⁹ In fact, prior to both auctions, PCSP was on notice of its responsibility to perform individual due diligence as it would for any new business venture and was expressly warned that a Commission license does not constitute a guarantee of business success.⁸⁰ Moreover, we disagree with PCSP’s argument that Progeny sought and received a “comparable” waiver to facilitate deployment of its beacon technology. We find that the rights expansion PCSP seeks is clearly distinguishable from the limited technical waiver granted to Progeny that was intended to enable its *location-based service* while preserving the location-based requirement and the coexistence spectrum sharing regime. In its waiver request, PCSP does not claim to have provided service at any point or even constructed a single station, while having held its licenses for nearly two decades during multiple extension periods. Since the Commission’s 2014 decision and the Division’s 2014 extension of the construction buildout requirements, instead of constructing an M-LMS system or engaging in a timely secondary market transaction to put the spectrum to use, PCSP made the voluntary business decision to propose a non-location-based service (in addition to M-LMS) on spectrum reserved for location-based services. The provision of a non-location-based service using M-LMS spectrum represents a fundamental expansion of spectrum rights beyond the service limitations for M-LMS licensees originally envisioned when the spectrum was auctioned and as expressly retained by the Commission in 2014. We find this reason alone sufficient to warrant denial of PCSP’s request for waiver of Section 90.353(b).⁸¹

15. We also note PCSP has not met its burden of providing sufficient and concrete technical information in its request about its proposed system that would establish a valid basis for granting a waiver. Its request raises significant technical uncertainties. For example, PCSP has not provided sufficient technical information addressing how its proposed system will transmit both MTC and M-LMS without causing interference between these different functions. PCSP fails to clearly demonstrate in its

⁷⁸ See *Amendment of Part 90 of the Commission’s Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems*, 12 FCC Rcd 13942, 13948, para. 14 (1997) (1997 M-LMS Order) (rejecting a request that M-LMS users be permitted unrestricted interconnection to the public switched telephone network in order to preserve the balance in the band). The Commission has repeatedly reinforced this principle throughout the history of the M-LMS band. See, e.g., *LMS Report and Order*, 10 FCC Rcd at 4708, para. 23 (finding that the prohibitions against providing interconnection and non-location based services “strike an equitable balance” between the needs of LMS service providers and the other users in the band).

⁷⁹ See *VHF Public Coast and Location and Monitoring Service Spectrum Auction Scheduled for June 6, 2001, Notice and Filing Requirements for 16 Licenses in the VHF Public Coast and 241 Licenses in the Location and Monitoring Service Auction, Minimum Opening Bids, Upfront Payments and Other Procedural Issues*, Public Notice, 16 FCC Rcd 6986, 6993-95 (WTB 2001) (Auction 39 procedures); *Auction of Location and Monitoring Service Licenses, Auction Notice and Filing Requirements for 528 Multilateration Licenses Scheduled for December 15, 1998, Minimum Opening Bids and Other Procedural Issues*, Public Notice, 13 FCC Rcd 18583, *3-5 (WTB 1998) (Auction 21 procedures).

⁸⁰ See *supra* note 79.

⁸¹ 47 CFR §§ 1.3, 1.925(b)(3).

filings how it would overcome the lack of commercially available equipment in the band, as PCSP stated was the case in the record,⁸² to operate the proposed companion M-LMS service in conjunction with MTC transmissions. Although PCSP generally alludes to LTE Release 13 features that it claims will allow it to deploy its system,⁸³ it omits the critical description of how these technical standards pertaining to IoT and GPS applications—neither of which use multilateration as described in the M-LMS service rules to triangulate location—will permit it to operate its companion M-LMS system on its licensed spectrum as described in the Commission’s rules.⁸⁴ Further, PCSP’s general technical information on LTE Release 13 fails to provide a sufficient technical demonstration as to how its operation would not adversely affect other users in the band. In particular, PCSP is silent regarding how its proposed system will protect primary federal users or operate on a secondary basis to ISM operations. With respect to the unlicensed users, PCSP does not adequately address how supporting IoT applications in addition to M-LMS as proposed would sufficiently alleviate the potential impact on Part 15 users. For example, PCSP speculates that the impact on Part 15 users will be minimal, as the interference caused by its system would only happen for very short periods of time.⁸⁵ In support, PCSP provides a hypothetical model while cautioning the Commission that it is “not to be taken literally as a prediction of future traffic patterns,”⁸⁶ which is insufficient to demonstrate that waiver is warranted.⁸⁷

16. *Waiver of the Construction Deadlines and Extension of Time.* As discussed above, PCSP seeks a waiver of its construction deadlines primarily to support its proposed IoT applications by transmitting MTC, with adjunct provision of an M-LMS service. As we have denied PCSP’s request for waiver of the location service requirement and PCSP provides no justification for affording relief to deploy a standalone M-LMS system, a solution PCSP repeatedly claims is not feasible,⁸⁸ we find that a waiver of the construction requirements would be contrary to both the public interest and underlying purpose of the rule, which is “to ensure that M-LMS licensees use spectrum to provide location-based services to consumers.”⁸⁹ We further find that PCSP’s failure to take concrete actions to develop or deploy an M-LMS system, or to commence any service, is not due to causes outside its control and is the result of voluntary business decisions, particularly given our prior statement that “it would be contrary to the public interest to grant extension requests in perpetuity where our build-out requirements have not been met.”⁹⁰ It is well-established that circumstances created by voluntary business decisions do not justify an extension of construction deadlines.⁹¹

⁸² PCSP Request at 11.

⁸³ PCSP does not specify how it will implement this standard, but instead references general 3GPP LTE Release 13 parameters to support its proposed use. *See id.* at 5 n.9 and 8 n.22 and 10; PCSP Reply at 4 and Declaration at 3-5, paras. 6-8.

⁸⁴ Given that PCSP does not expressly seek a waiver of the triangulation requirement or any other relevant M-LMS rules, we assume that PCSP seeks additional time to operate its system in complete compliance with all other applicable service rules.

⁸⁵ *See* PCSP Reply at Declaration at 5, para. 9 n.1 (hypothetical parameters presented).

⁸⁶ *See id.*

⁸⁷ In demonstrating whether a waiver is warranted, the burden of proof rests with the petitioner. *Tuscan Radio, Inc., v. FCC*, 452 F.2d 1380, 1382 (D.C. Cir. 1971).

⁸⁸ *See* PCSP Request at 11; PCSP Amended Request at 6. *See also 2014 Extension Order*, 29 FCC Rcd at 10368, para. 17 (“[e]ven if the equipment market does not develop consistent with M-LMS licensees’ chosen business plans, licensees will nonetheless be subject to the construction requirements”).

⁸⁹ *2017 Progeny Extension Order*, 32 FCC at 136, para. 28.

⁹⁰ *2014 Extension Order*, 29 FCC Rcd at 10367, para. 17.

⁹¹ 47 CFR §§ 1.946(e), 90.155(g); *2017 M-LMS Order on Recon*, 32 FCC Rcd at 562, para. 15.

17. Accordingly, we deny PCSP's request to waive or extend the interim and final construction deadlines for its M-LMS licenses⁹² and, therefore, call signs WPYE267-298 automatically terminated as of September 4, 2016, for failure to meet the interim construction deadline, pursuant to Section 1.946(c) of the Commission's rules.⁹³

III. ORDERING CLAUSES

18. IT IS ORDERED that, pursuant to Sections 2 and 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 152, 154(i), and Sections 1.3, 1.925(b)(3), 90.155(d), and 90.155(g) of the Commission's rules, 47 C.F.R. §§ 1.3, 1.925(b)(3), 90.155(d), 90.155(g), the requests of PCS Partners, L.P., filed on April 15, 2016, as set forth in Appendix A attached to this Order, for waiver of the location service requirement, extension and waiver of the interim and final construction deadlines, and for expedited treatment, as amended by PCS Partners, L.P. on August 19, 2016, as set forth in Appendix B attached to this Order, ARE DENIED.

19. Accordingly, pursuant to Section 1.946(c) of the Commission's rules, 47 C.F.R. § 1.946(c), all call signs set forth in Appendix A and B attached to this Order TERMINATED AUTOMATICALLY AS OF September 4, 2016.

20. These actions are taken under delegated authority pursuant to Sections 0.131 and 0.331 of the Commission's rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Roger S. Noel
Chief, Mobility Division
Wireless Telecommunications Bureau

⁹² 47 CFR §§ 1.3, 1.925(b)(3), 90.155(g).

⁹³ 47 CFR § 1.946(c).

APPENDIX A

PCS Partners Applications Filed on April 15, 2016

File No.	Call Sign	Market	Purpose	Channel Block
0007232430	WPYE298	El Paso	Modification	A
0007232431	WPYE297	Odessa-Midland	Modification	A
0007232434	WPYE296	McAllen-Edinburg-Mission	Modification	A
0007232439	WPYE295	Corpus Christi	Modification	A
0007232442	WPYE294	Oklahoma City	Modification	A
0007232446	WPYE293	Duluth-Superior	Modification	A
0007232448	WPYE292	Wausau	Modification	A
0007232449	WPYE290	Rochester, MN-IA-WI	Modification	A
0007232450	WPYE289	La Crosse	Modification	A
0007232451	WPYE288	Madison	Modification	A
0007232452	WPYE287	Kansas City	Modification	A
0007232454	WPYE286	Springfield	Modification	A
0007232455	WPYE285	St. Louis	Modification	A
0007232456	WPYE284	Beaumont-Port Arthur	Modification	A
0007232458	WPYE283	Huntsville	Modification	A
0007232459	WPYE282	Louisville	Modification	A
0007232460	WPYE281	Indianapolis	Modification	A
0007232461	WPYE280	Appleton-Oshkosh-Neenah	Modification	A
0007232466	WPYE279	Green Bay	Modification	A
0007232467	WPYE278	Columbus	Modification	A
0007232469	WPYE277	Dayton-Springfield	Modification	A
0007232472	WPYE276	Cincinnati-Hamilton	Modification	A
0007232480	WPYE275	Hickory-Morganton	Modification	A
0007232495	WPYE274	Asheville	Modification	A
0007232497	WPYE273	Charleston-North Charleston	Modification	A
0007232500	WPYE272	Wilmington	Modification	A
0007232502	WPYE271	Fayetteville	Modification	A
0007232504	WPYE270	Norfolk-Virginia Beach-Newport	Modification	A
0007232507	WPYE269	Rochester, NY-PA	Modification	A
0007232509	WPYE268	Syracuse	Modification	A
0007232511	WPYE267	Albany-Schenectady-Troy	Modification	A
0007232513	WPYE267	Albany-Schenectady-Troy	Extension - First Deadline	A
0007232514	WPYE268	Syracuse	Extension - First Deadline	A
0007232515	WPYE269	Rochester, NY-PA	Extension - First Deadline	A
0007232516	WPYE270	Norfolk-Virginia Beach-Newport	Extension - First Deadline	A
0007232517	WPYE271	Fayetteville	Extension - First Deadline	A
0007232518	WPYE272	Wilmington	Extension - First Deadline	A
0007232519	WPYE273	Charleston-North Charleston	Extension - First Deadline	A
0007232520	WPYE274	Asheville	Extension - First Deadline	A
0007232521	WPYE275	Hickory-Morganton	Extension - First Deadline	A
0007232522	WPYE276	Cincinnati-Hamilton	Extension - First Deadline	A
0007232523	WPYE277	Dayton-Springfield	Extension - First Deadline	A
0007232524	WPYE278	Columbus	Extension - First Deadline	A
0007232525	WPYE279	Green Bay	Extension - First Deadline	A
0007232526	WPYE280	Appleton-Oshkosh-Neenah	Extension - First Deadline	A
0007232527	WPYE281	Indianapolis	Extension - First Deadline	A
0007232528	WPYE282	Louisville	Extension - First Deadline	A

0007232529	WPYE283	Huntsville	Extension - First Deadline	A
0007232530	WPYE284	Beaumont-Port Arthur	Extension - First Deadline	A
0007232531	WPYE285	St. Louis	Extension - First Deadline	A
0007232532	WPYE286	Springfield	Extension - First Deadline	A
0007232533	WPYE287	Kansas City	Extension - First Deadline	A
0007232534	WPYE288	Madison	Extension - First Deadline	A
0007232535	WPYE289	La Crosse	Extension - First Deadline	A
0007232536	WPYE290	Rochester, MN-IA-WI	Extension - First Deadline	A
0007232537	WPYE292	Wausau	Extension - First Deadline	A
0007232538	WPYE293	Duluth-Superior	Extension - First Deadline	A
0007232539	WPYE294	Oklahoma City	Extension - First Deadline	A
0007232540	WPYE295	Corpus Christi	Extension - First Deadline	A
0007232541	WPYE296	McAllen-Edinburg-Mission	Extension - First Deadline	A
0007232542	WPYE297	Odessa-Midland	Extension - First Deadline	A
0007232543	WPYE298	El Paso	Extension - First Deadline	A
0007232547	WPYE267	Albany-Schenectady-Troy	Extension - Second Deadline	A
0007232548	WPYE268	Syracuse	Extension - Second Deadline	A
0007232549	WPYE269	Rochester, NY-PA	Extension - Second Deadline	A
0007232550	WPYE270	Norfolk-Virginia Beach-Newport	Extension - Second Deadline	A
0007232551	WPYE271	Fayetteville	Extension - Second Deadline	A
0007232552	WPYE272	Wilmington	Extension - Second Deadline	A
0007232553	WPYE273	Charleston-North Charleston	Extension - Second Deadline	A
0007232554	WPYE274	Asheville	Extension - Second Deadline	A
0007232555	WPYE275	Hickory-Morganton	Extension - Second Deadline	A
0007232556	WPYE276	Cincinnati-Hamilton	Extension - Second Deadline	A
0007232557	WPYE277	Dayton-Springfield	Extension - Second Deadline	A
0007232558	WPYE278	Columbus	Extension - Second Deadline	A
0007232559	WPYE279	Green Bay	Extension - Second Deadline	A
0007232560	WPYE280	Appleton-Oshkosh-Neenah	Extension - Second Deadline	A
0007232561	WPYE281	Indianapolis	Extension - Second Deadline	A
0007232562	WPYE282	Louisville	Extension - Second Deadline	A
0007232563	WPYE283	Huntsville	Extension - Second Deadline	A
0007232564	WPYE284	Beaumont-Port Arthur	Extension - Second Deadline	A
0007232565	WPYE285	St. Louis	Extension - Second Deadline	A
0007232566	WPYE286	Springfield	Extension - Second Deadline	A
0007232567	WPYE287	Kansas City	Extension - Second Deadline	A
0007232568	WPYE288	Madison	Extension - Second Deadline	A
0007232569	WPYE289	La Crosse	Extension - Second Deadline	A
0007232570	WPYE290	Rochester, MN-IA-WI	Extension - Second Deadline	A
0007232571	WPYE292	Wausau	Extension - Second Deadline	A
0007232572	WPYE293	Duluth-Superior	Extension - Second Deadline	A
0007232573	WPYE294	Oklahoma City	Extension - Second Deadline	A
0007232574	WPYE295	Corpus Christi	Extension - Second Deadline	A
0007232575	WPYE296	McAllen-Edinburg-Mission	Extension - Second Deadline	A
0007232576	WPYE297	Odessa-Midland	Extension - Second Deadline	A
0007232577	WPYE298	El Paso, TX-NM	Extension - Second Deadline	A

APPENDIX B**PCS Partners Applications Filed on August 19, 2016**

File No.	Call Sign	Market	Purpose	Channel Block
0007404649	WPYE291	Minneapolis-St. Paul	Modification	C
0007404654	WPYE291	Minneapolis-St. Paul	Extension - First Deadline	C
0007404657	WPYE291	Minneapolis-St. Paul	Extension - Second Deadline	C